

“The Fever”



The 1855 Epidemic of Yellow Fever in
Hampton Roads, and the Influence of Disease
on American History, 1855 - 1919

“The Fever” as History



- ❧ In 2005, the Virginian-Pilot published a serial article on an epidemic which plagued our region 150 years earlier – the Yellow Fever Outbreak of 1855.
- ❧ The role of disease in history is one which historians tend to shy away from, because scholars are more comfortable with stories involving human agency – the ability we have as individuals to determine our own destiny. Or, as some may say, “our unique capacity to deserve our own fates.” The idea that disease can arbitrarily wipe out entire populations is unsettling to many historians – and to everyone else for that matter. And victories over disease, when we can claim them at all, are costly in terms of both resources and their human toll.

❧ A TIMELINE OF EVENTS & A HISTORY OF DISEASE, 1855 - 1919

- ❧ 1855 – “The Fever” plagues Norfolk and Portsmouth, VA, resulting in approximately 2700 dead.
- ❧ 1861-1865 – *More soldiers died of disease during the Civil War than from battlefield casualties.*
- ❧ 1878 – Yellow Fever stalks the Mississippi River Valley, taking 18,000 lives from New Orleans, LA to Memphis, TN.
- ❧ 1898 – 1902 – During the Spanish-American War and the Filipino Insurrection (The War to Colonize the Philippines) *more than ten times as many soldiers died of disease than from combat.*
- ❧ 1900 – The Scientific Method is put work. Louis Pastuer’s germ theory of disease is tested on human subjects – and seems to prove that Mosquitoes – *Aedes Aegypti* transmit the disease.
- ❧ 1903 – The Panama Canal is built, but *yellow fever and malaria take the lives of over 5,000 Americans in the process.* Dr. William Gorgas attempts to eradicate disease in Panama by exterminating mosquitoes – an his methods are largely successful. During the 1880s, a failed effort by the French to build a canal through Panama had resulted in over *20,000s deaths – mostly due to yellow fever and malaria.*
- ❧ 1914 – 1918 – In the most devastating conflict Europeans had ever known, over 15 Million men and women a perish. Approximately 125,000 are American “doughboys.”
- ❧ 1918-1919 – *A global pandemic known as the Spanish Flu takes the lives of close to 40 Million People world wide – over twice the number who died during the Great War. 600,000 are Americans.*

How can we fit an Antebellum non-fiction narrative into our studies?

Perhaps we need to consider this work more thematically than others we have studied, and place it into a different historical context. After all, the way our textbook or the Virginia Beach City Public Schools have chosen to arrange our units of study is not the only way to approach the study of history. Consider the timeline to the left of this frame, in which disease plays a central role in the narrative of events. We could study history this way, too, couldn’t we?

Writing History: The Role of Disease and Advances in Medical Treatment



- ❧ When historians write, they chose their topics with care. But no matter what they decide to write about, they exclude many other topics simply by narrowing their focus to any particular theme. Consider this. Usually when we study the 1950s, Americans tend to focus on events in the Cold War – the lingering conflict in Korea, the emerging conflict in Vietnam, brinksmanship, the Space Race (*SPUTNIK!*), the Arms Race – or the Civil Rights Movement – the *Brown V. Board of Education, Topeka, KS* Supreme Court decision of 1954, the Montgomery Bus Boycott, the Little Rock Nine.
- ❧ But what topics are excluded by focusing on these stories?

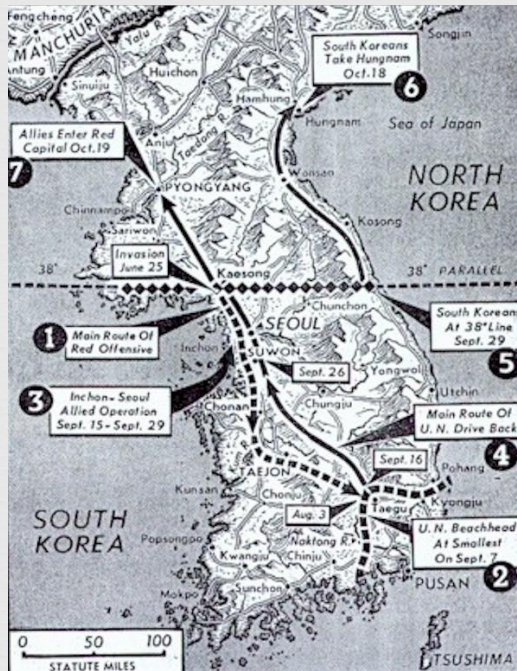
Jonas Salk and the Polio Vaccine



The son of Russian-born, Jewish immigrants, Jonas Salk developed a vaccine to prevent polio. Poliomyelitis, or “infantile paralysis” was a much feared disease during the first half of the 20th Century. Those who lived through the initial stages of the disease, like President Franklin Delano Roosevelt, often suffered partial paralysis. But in 1955, after seven years of research, Salk’s vaccine was mass-produced, saving lives and eradicating the killer disease. Today, it is rarely encountered in the United States. Salk took no patent on this life-giving cure, accepted no financial reward, and claimed, “There is no patent. Could you patent the sun?” See if Pfizer or Johnson & Johnson make any such proclamation during the course of your lifetime. Yet, he doesn’t merit even a token mention in your textbook: *America: History of Our Nation*.

Which topic is more important?

The Lives Lost in the Korean War?



The Lives Saved by Jonas Salk's Polio Vaccine?



Medicine and History



- ❧ Of course, both of these topics are essential knowledge in US History.
- ❧ They are easier to study separately than they are to study simultaneously. But it may be important to remind ourselves that the way we categorize and study history is not the way people lived. They lived through the fear of polio, and the fear of communism, and the righteous conflict and turmoil of the Civil Rights movement as they happened – concurrently! Like us, the historical characters in our studies did not know how events in their lifetimes would unfold. We know now. But, as the historian David McCullough reminds us, “There is no foreseeable future.” Not for them, and not for us.

“The Fever”



How Local History Shapes and Influences
Our Inquiries and Perception

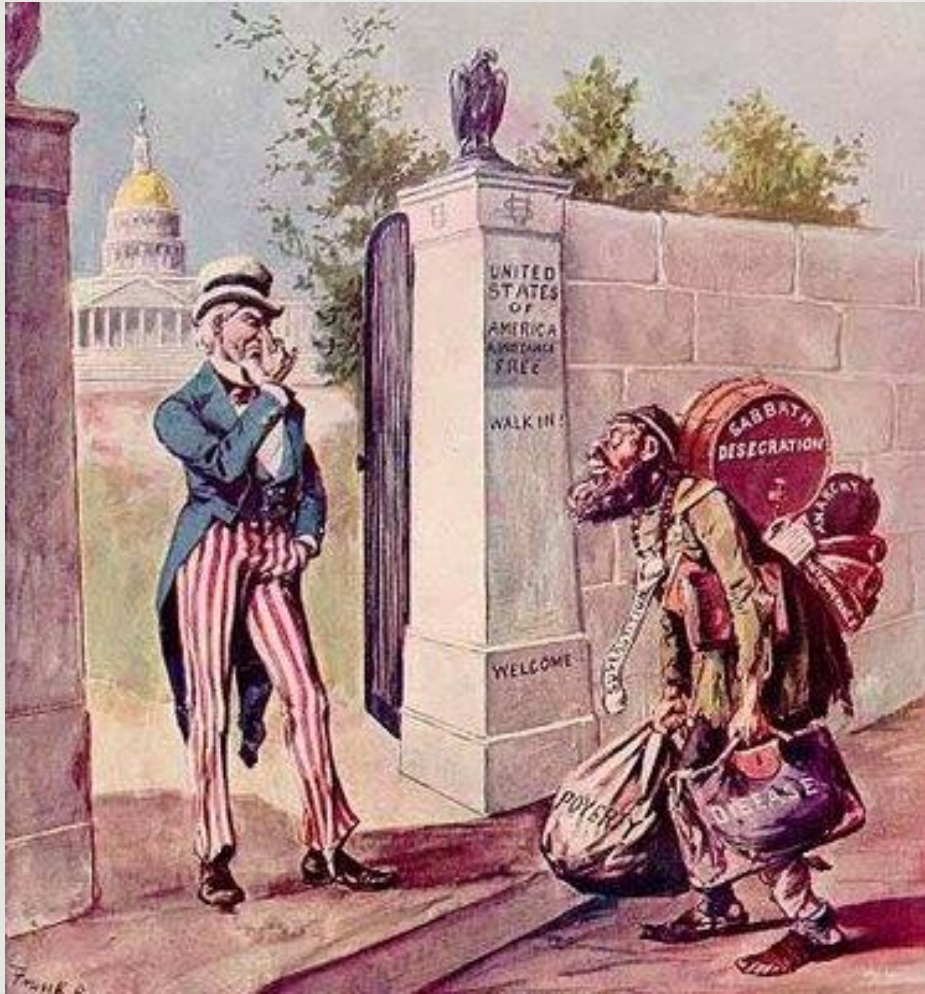
“The Destroyer”



❧ The *Benjamin Franklin* was a poorly constructed trading vessel which arrived at the port of Gosport, in Portsmouth, VA in the summer of 1855. The port's health inspector, upon learning that two sailors had died during their voyage from the West Indies, quarantined the ship at Craney's Island.

❧ The port of Norfolk, aspiring to be “The Queen of the Chesapeake” and the rival of larger cities like Philadelphia, New York, and Boston, feared outbreaks of epidemic disease for their human impact and their negative influence on trade.





The “Others”: The Role of Outsiders, Immigrants, and Marginalized Characters in US History

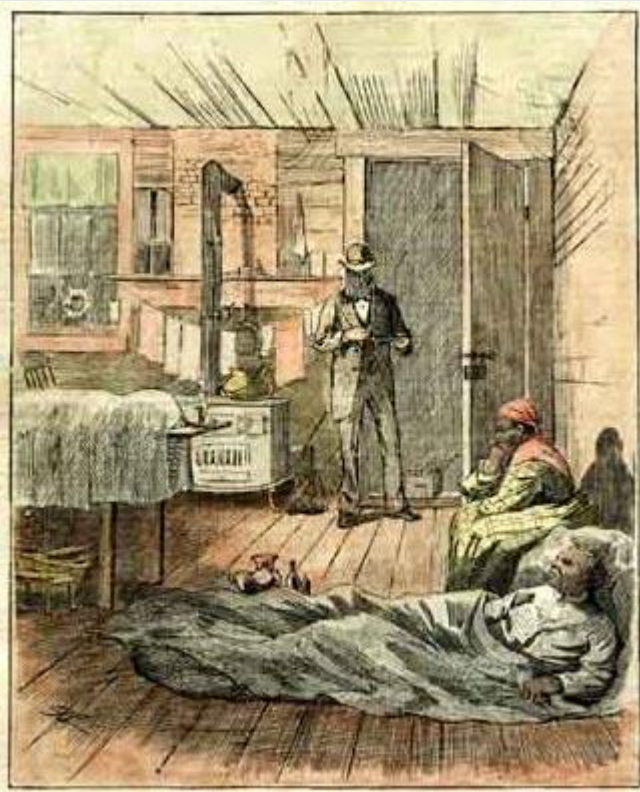
Wherever disease, pandemic, misfortune, or disaster takes place, communities historically have included members who assigned blame for the onset of their troubles. Some interpret the events as God’s punishment for sinful behavior; others claim that outsiders – immigrants, minority groups, or radicals – were the cause of their trials and tribulations.



The Disease Strikes

But, note, that the disease in question, yellow fever, had been present in Norfolk on many occasions prior to 1855. Yet, two groups are largely associated with the outbreak and spread of the disease – the crew of the *Benjamin Franklin*, a northern vessel sailing from a West Indian port, and the Irish immigrants of the Gosport section of Portsmouth. The ship may have been the cause of the outbreak, but it may just as likely have been homegrown, like others which had plagued our region since Jamestown was established (1607). Irish tenement dwellers, far from being the cause of the epidemic, were victims of the disease. Norfolk's treatment of the Irish immigrants may be explained by nativism, the hostility and bigotry toward immigrants which was common in this period.

Yellow Fever



Yellow Fever's symptoms were well known around the Hampton Roads area, as they had been seen before:

- ❧ Weariness, Restlessness, and Depression
- ❧ Headaches
- ❧ Joint Pain
- ❧ Fever
- ❧ Redness around the eyes and face
- ❧ Blood oozing from the ears, nose, and mouth
- ❧ Black vomit
- ❧ Senseless moaning, babbling, neurological disruptions
- ❧ Sensitivity to contact with their skin



The Quarantine

Once word arrived in the surrounding area that the disease was rampant, other local cities passed ordinances to protect themselves. Suffolk, Fort Monroe, and counties as far away as North Carolina forbid anyone who had so much as passed through the cities of Portsmouth or Norfolk from entering the city limits. How citizens in sparsely populated Princess Anne County responded is not as clear in the record of the 1855 epidemic. Citizens of Norfolk and Portsmouth, however, reacted with disgust to the rebuff from their neighbors.



A Quarantine of Their Own

If the people of Norfolk were frustrated with the quarantine imposed upon them, it didn't stop them from establishing a quarantine of their own around the portion of the city they viewed as responsible for their troubles. A 24 foot wooden fence was erected around Barry's Row, a poor section of mostly Irish tenements on the southwestern boundary of the port of Norfolk.



Anti-Irish Nativism

Anti-Irish (and anti-Chinese, as this political cartoon attests) nativism was well established at this point in history – the Irish were targeted for their Catholicism, intemperance, and their failure to assimilate into American communities. Because most came to the United States penniless and struggling, they were also associated with poverty, crime, and disease. The ports as Gosport and the Barry's Row section of Norfolk were both poor, Irish communities where overcrowded tenements were believed to have resulted in the spread of Yellow Fever.



Tenements

The tenements in Barry's Row in Norfolk and on the Portsmouth side of the Elizabeth River at Gosport undoubtedly contributed to the spread of disease. They were located low-lying, mosquito-infested tidal areas which often flooded, were overcrowded, and were generally unsanitary. In August of 1855, though, when Norfolk citizens set fire to the overcrowded tenements, they were blaming the victims of Yellow Fever – and making matters worse. As refugees were forced to evacuate, escaping the slums, the Fever outbreak spread across the Hampton Road region.

Pandemics

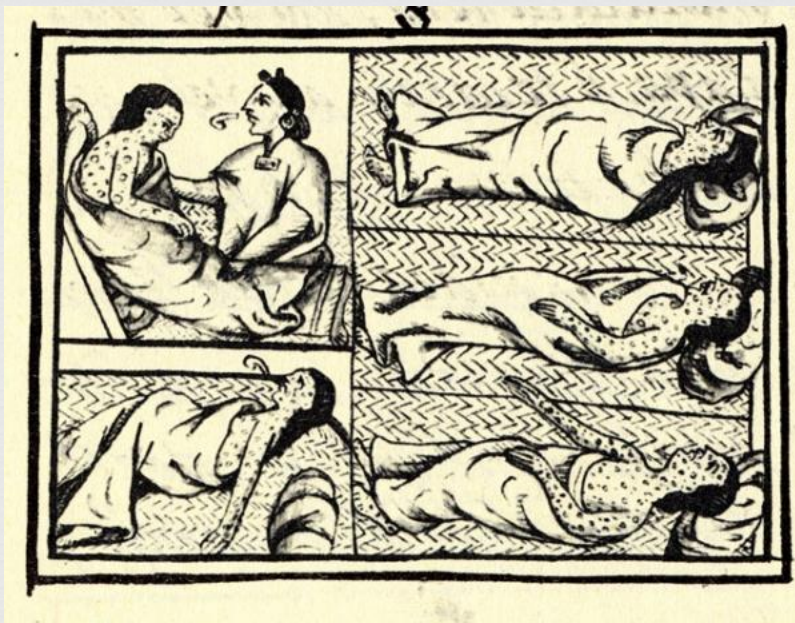


- ❧ Epidemics, of course, have occurred over and over again across history. Bubonic Plague tortured Europe throughout the Middle Ages; smallpox, typhoid, malaria, dysentery and even influenza have caused deadly outbreaks of disease.
- ❧ Native American societies were devastated by wave upon wave of virgin soil epidemics.
- ❧ How a society responds during a time of crisis – in terms of medical treatment, spiritual guidance, and the satisfaction of basic needs – can determine whether the society survives or collapses.
- ❧ Whether or not a nation can overcome epidemic disease can also have dramatic consequences on industrial or military endeavors, as Americans came to realize at the turn of the 20th century.

Epidemics



Smallpox wrecked 16th Century
Native Americans Societies.



Yellow Fever devastated 19th
Century American urban centers.



Norfolk and Portsmouth Cope with Yellow Fever

✧ Norfolk was a relatively large city of almost 16,000 in 1855, and Portsmouth, across the Elizabeth River, had a population of close to 10,000. The cities were diverse – enslaved Americans made up close to half of the population; perhaps one in six African-Americans were free. Poor Irish immigrants made up a portion of the population as well – the Great Potato Famine of 1847 (Black '47) had resulted in a population surge over the past ten years or so.

- Because Norfolk and Portsmouth housed the Naval Shipyard, the cities could rely on the Naval Hospital to aid during the Fever.
- Over twenty (20) churches existed in the two cities – providing a social structure to deal with illness and death, charity and nursing.
- Communication with other major cities via trade vessels and newspapers allowed word of the epidemic to spread rapidly – for better and for worse...
- Charitable organizations, principally the Howard Association in this instance, served the community .

Darwinism



- ❧ Most of us, by now, have at least a rudimentary notion of the ideas put forth by Charles Darwin in his noteworthy works on evolution, *On the Origin of the Species (1859)* among them. The basics of evolution, that natural selection results in changes in various species; that the strong survive; and that by surviving they have the opportunity to pass on their genes – are more or less agreed to by all serious scientists. Most scientists agree that the mankind emerged from a lower order of primates accordingly. Natural selection caused species to evolve.
- ❧ So, what are the implications of this socially?

Social Darwinism



- ❧ By the late 1800s, many of the great industrialists and men of power and influence in America argued that they were entitled to power and influence based on their ability to succeed economically. Seeing parallels between economic competition and competition between animals for survival, and judging themselves “the strong,” they suggested that they were entitled to make as much profit as possible, exploit the poor, and that if the weakest members of society suffered and died in the process, so much the better for the gene pool.
- ❧ But do the best and brightest, the fittest and strongest, actually have a better chance to survive and prosper?

Social Darwinism



- ❧ Does the most courageous soldier on the battlefield stand a better chance of surviving a conflict than a cowardly deserter?
- ❧ Does the doctor or nurse who provides aid to infirmed patients have a greater chance of surviving an epidemic or a lesser chance?
- ❧ Does the minister who conveys spiritual guidance and provides social structure during times of epidemic disease stand a greater or lesser chance of survival than the minister who flees in fear?
- ❧ And, who's genes are more likely to be passed on?

Social Darwinism



- ❧ The most devoted advocates of Social Darwinism would might argue that epidemic disease – especially epidemics that disproportionately effected the poor – would actually benefit society in the long run by killing off the “weak.”
- ❧ Never mind that the immune systems of almost every person in a given region are similar and that the factors which influence the spread of contagious disease are almost exclusively environmental. Those who survive pandemics and life threatening events must deserve to carry their genes forward.

Maintaining Society



☞ Dealing with sickness and death and healing and convalescence is a complex problem for any society. Most families rely upon doctors and the medical profession to facilitate good health; many also rely on their religious leaders and prayer. Neither method proved to be particularly effective during the Fever of 1855; yet, those who attempted to maintain the customs and forms of etiquette in 19th Century Virginia became heroic figures; some became martyrs. The semblance of order which prevailed as a result of these individuals' efforts was critical to the survival of the cities.



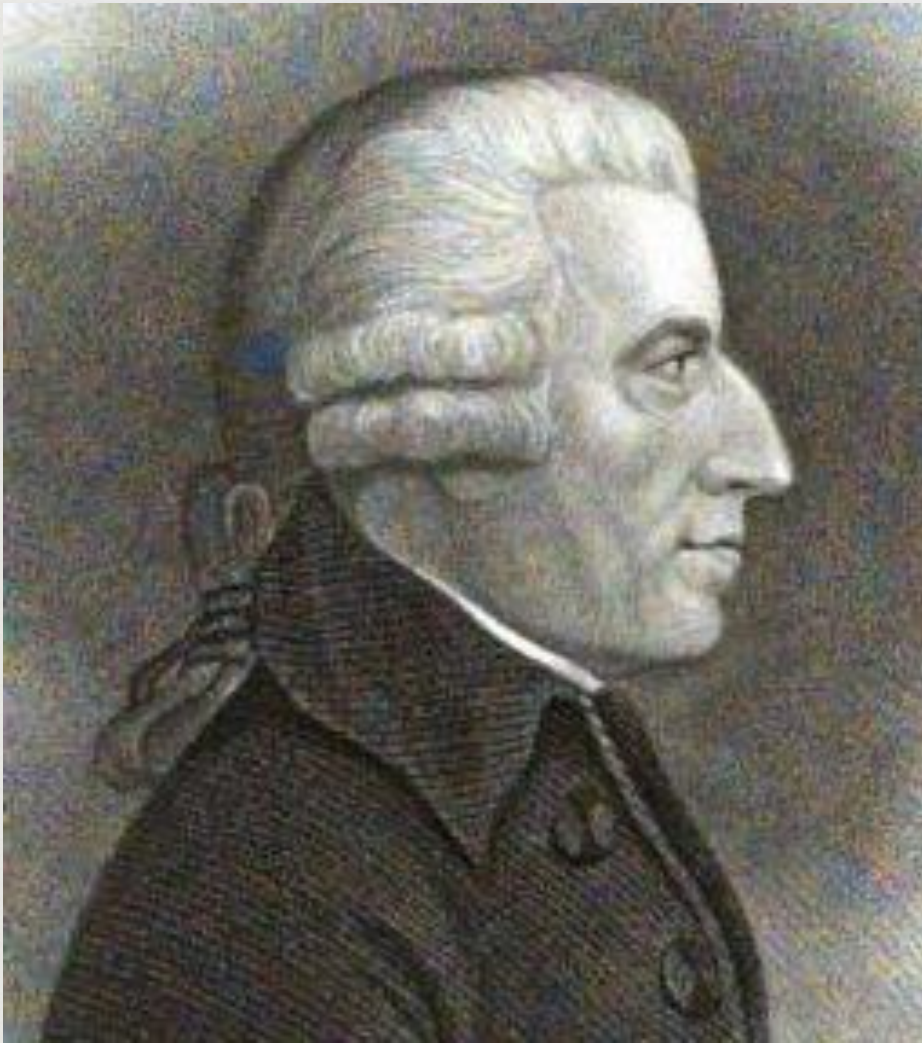
Rev. George Armstrong

The First Presbyterian Church's minister and central figure in "The Fever" refused to leave Norfolk during the darkest hours of the epidemic. Although his career and politics after the war are unsavory, he was devoted to maintaining stability and religious decorum during a tragic chapter in Norfolk history.

Mayor Hunter Woodis



✧ Mayor Woodis' service to the community was much revered as well. According to the article, he "personally went into the city's infected alley and tenements to help stave off the disease. Then the fever assailed him, and the news of his illness crippled civic spirit."



The Howard Association

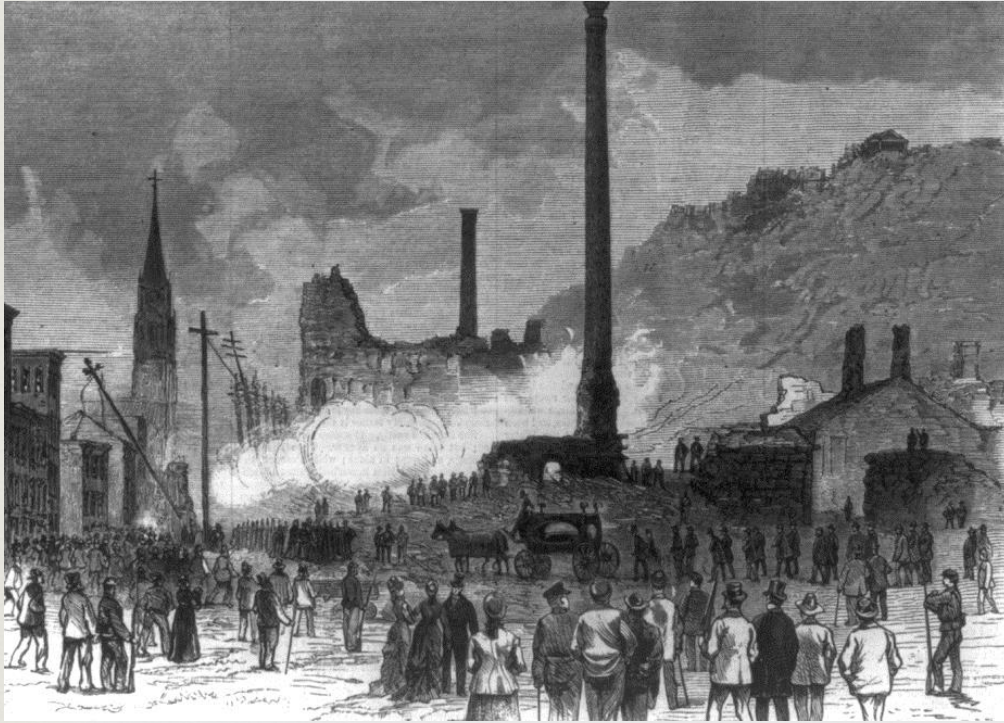
The Howard Association was a charitable group which had been founded in England during the early 19th Century to encourage prison reform. The group was devoted to directing relief efforts in parts of the world where tragedy had struck - and was focused on poor communities afflicted with yellow fever. During the "Fever" summer of 1855 in Norfolk and Portsmouth, donations from across the country and volunteer doctors and nurses came to serve the community. And it was the Howard Association which organized and maintained the volunteers throughout the dreadful summer.



Father Matthew O'Keefe

The Catholic priest in Norfolk whose parish included most of the Irish community worst afflicted by the Yellow Fever epidemic was a hero in his own right. Although the tenement community he served was especially dangerous territory during the summer of 1855, Father O'Keefe was praised by his Protestant colleague Rev. Armstrong for his devoted service to the community in its time of need.

John Jones, Enslaved Hearse Driver and Undertaker

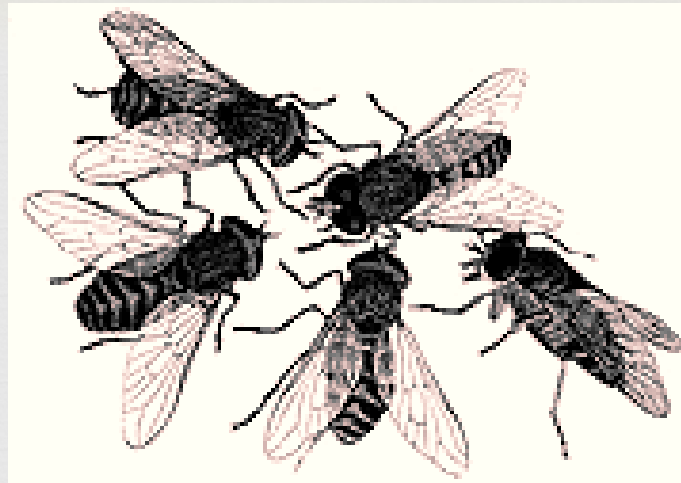
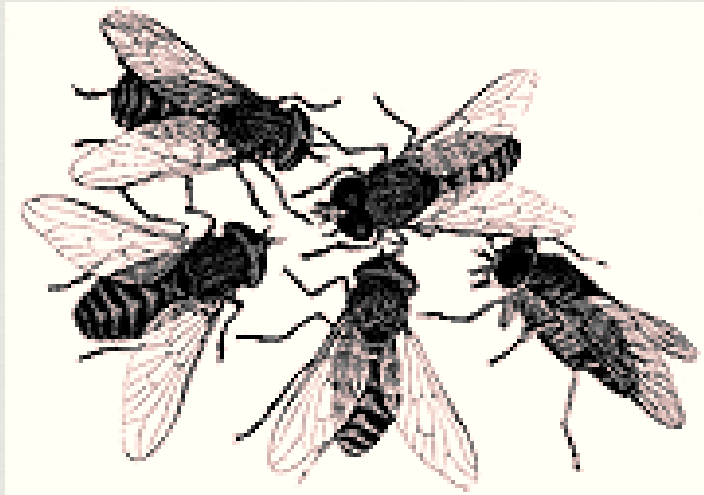


Enslaved Virginian John Jones was responsible for carrying the dead from their homes to the morgue. Since most families fled the bodies of yellow fever victims in fear of infection and contagions, Jones was required to perform the solemn duty. He steadfastly shouldered the bodies, placed them in their coffins, and drove them to the cemeteries. When grateful whites suggested pooling their resources to purchase his freedom should he survive the epidemic, Jones declined. Virginia state law would have required that he leave the state upon emancipation, and his family and loved ones would be forced to remain behind.

History as a profession, particularly before the late 20th Century, was often the realm of old white men. It should not be too surprising then, to discover that the vast majority of the heroic figures in United States history prior to the 1950s were (drum roll, please:) old, white, men. (Consider Washington, Jefferson, Madison, Webster, Clay, Calhoun, Lee, Grant, Lincoln...) Indeed, they were often dead white men. But almost never were they women or minority figures. It is probably safe to assume, however, that many anonymous women played a major role in the charitable efforts which took place throughout the cities of Norfolk and Portsmouth. Women were a majority of the congregation members in the local churches, and frequently held Sunday School responsibilities. (NOTE: Public schools did not become features of the community until the Reconstruction Era, when formerly enslaved African-Americans demanded them.) Some women had entered the nursing field as well (a profession once dominated by men.) Let it suffice to say that women were not the feeble characters included [excluded?] in this narrative....

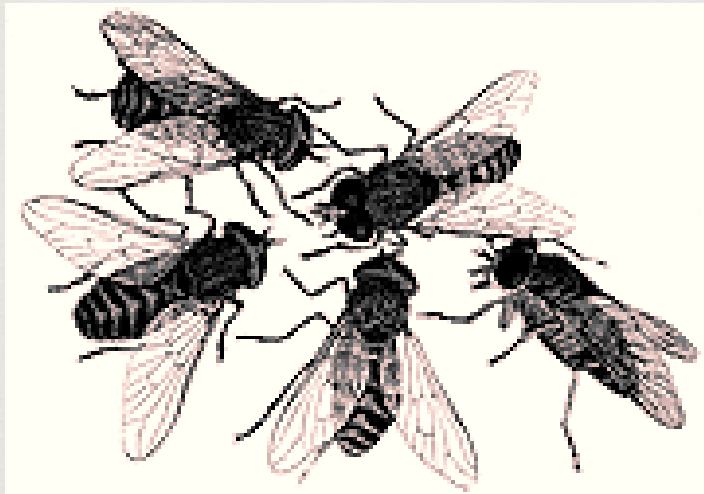
The Role of Women in the Yellow Fever Epidemic of 1855

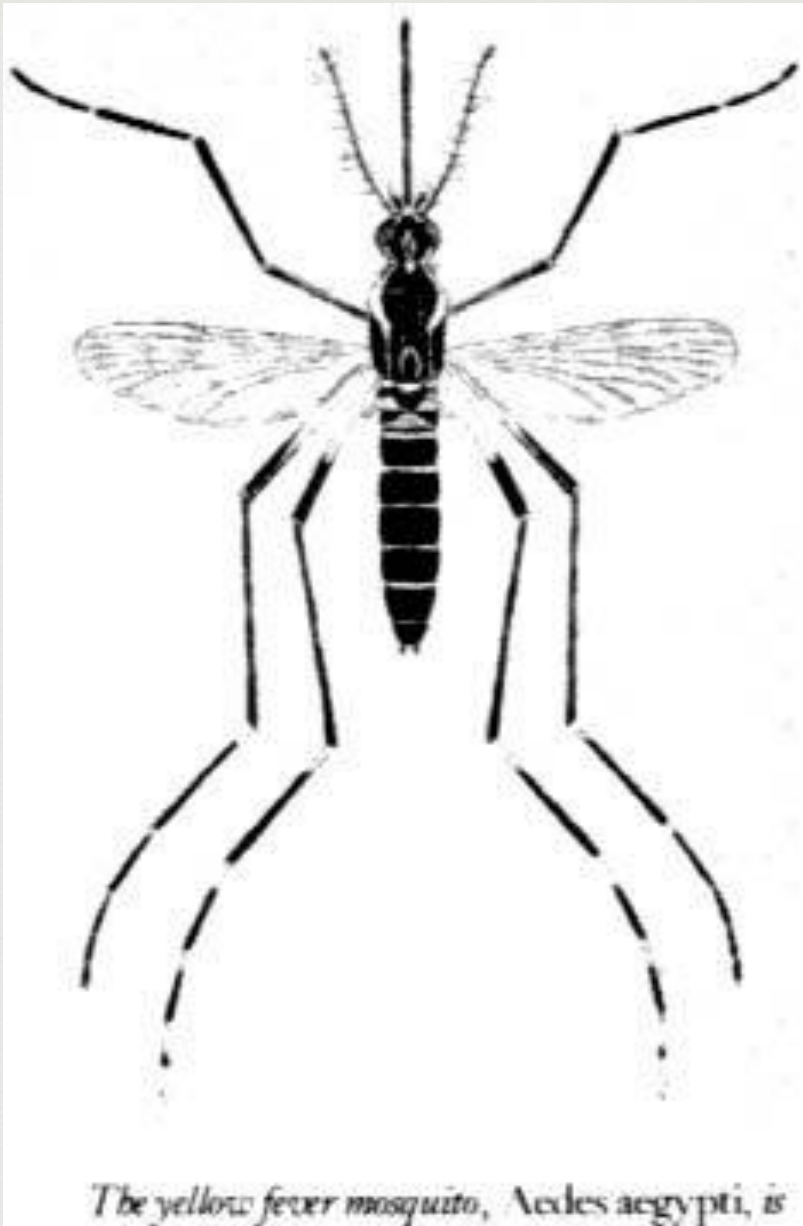
According to the article, the role of women during the epidemic was to (a) run away in fear, (b) beg their husbands to evacuate the cities in fear, or (c) meekly die from "The Fever." The only heroic female figure in the narrative at all was, "Mary, the colored woman next door," who three orphaned children reported, "gives us some bread every day."



What ended “The Fever” of 1855?

Many African-Americans believed that the so-called “plague flies” which infested the region during the late weeks of August were responsible for devouring the disease, and ending the infestation. No doubt, many believed prayers were answered when the Yellow Fever epidemic diminished and disappeared during October of 1855. The work of religious leaders and the Howard Association undoubtedly saved lives, but it did not end the epidemic, which prevailed through mid-October of 1855.





The Hard Frost

In reality, what ended the epidemic was a much simpler event, which took place during the early morning hours of October 14th. Frost. The cold weather and freezing temperatures killed off what remained of the population of *Aedes Aegypti* mosquitoes, which, unbeknownst to the population at large, had been the carriers and accomplices of "The Destroyer."

Infectious Disease and American History

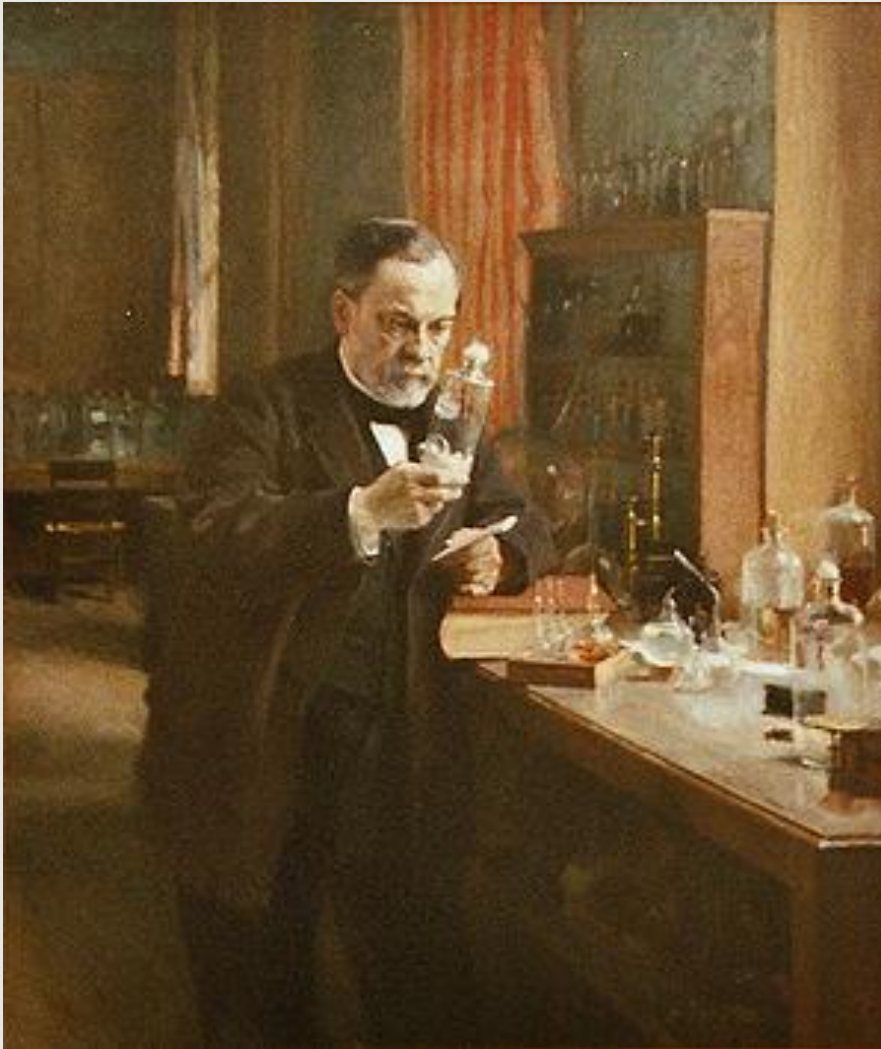


An Sketch and Overview of Disease and
Medical Advances Since 1865

Yellow Fever & Malaria



- ❧ Norfolk and Portsmouth were not the only cities in the United States to suffer from infestations of infectious disease. The active ports of Philadelphia, Baltimore, New York, Boston, Charleston, and New Orleans all faced similar plagues throughout the late 19th and early 20th Centuries.
- ❧ During the Civil War (1861 – 1865), more Americans died from disease than from battle casualties.
- ❧ In the year 1878, virtually the entire Mississippi River Valley was victimized by Yellow Fever – the city of Memphis, TN suffered particularly.
- ❧ The last major Yellow Fever Epidemic took place in New Orleans in 1905, when over 400 citizens died during one dreadful summer.



FINDING THE CURE

Louis Pasteur: Pasteurization and Germ Theory

Louis Pasteur will forever be immortalized by the process of pasteurization, the heating of products like milk in order to kill off any bacteria or viruses which may exist in the product. His successes were born from a belief – a belief he painstakingly bore out with irrefutable empirical evidence – that diseases were the result of contamination by invisible contagions. We know them today as viruses, bacteria, and pathogens.



HISTORY AND SCIENCE COLLIDE:

“Remember the Maine!” – The Spanish American War, 1898

The United States was more than ready militarily to defeat our Spanish rivals in the Spanish-American War in 1898. The more difficult task was to manage disease during the war. Almost ten times as many men died of disease during the conflict as died in battle.



Walter Reed, US Army Surgeon

A graduate of the University of Virginia, Walter Reed had the easy part in an important experiment. Using human test subjects, he attempted to demonstrate that the cause of Yellow Fever was an invisible pathogen transferred by mosquitos – specifically, the *Aedes Aegypti* mosquito. One of his test subjects, Jesse Lazear, died during the experiment. But when both Lazear and James Carroll were infected by the mosquitos, the critical information was learned. Yellow Fever was caused by a pathogen mosquitos carried. Kill the mosquitos, and you kill the disease. While Reed received most of the glory for this accomplishment (The Walter Reed VA Hospital is named in his honor), his colleagues, including the late Jesse Lazear, Dr. Aristides Agramonte, and Dr. James Carroll, were never celebrated for their selfless participation in a lethal human trial. Moreover, all of the men in question were simply carrying out an experiment which had already been successfully vetted by a Cuban doctor - Dr. Carlos Juan Finlay.



The Panama Canal

Even after these tests seemed to prove that the *Aedes Aegypti* mosquito was responsible for the transmission of Yellow Fever, the public at large was skeptical. The event which did more to make believers out of Americans than any other was the construction of the Panama Canal, between 1903 and 1914. From 1881 to 1889, the French had attempted to construct a canal across Panama. Despite the leadership of French national hero Ferdinand de Lesseps – the leader of the Suez Canal project a decade earlier – and the genius of mechanical engineer Gustave Eiffel in designing the canal's complex lock system, the French effort nevertheless failed. They were undermined by twin plagues – Yellow Fever and Malaria. After wasting an a fortune in lives and resources, the effort was called off in 1889, resulting in financial ruin for the publically-owned French company and economic stagnation for the nation.



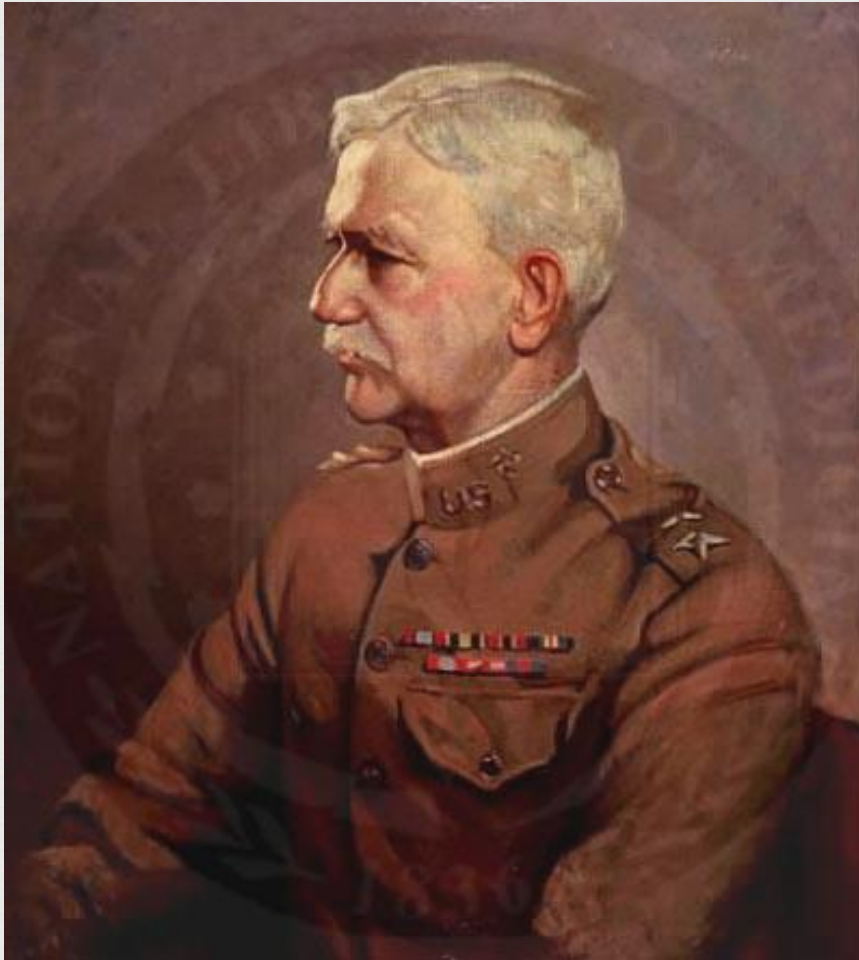
Enter Theodore Roosevelt's "Big Stick" Diplomacy

In 1903, after the sovereign nation of Colombia had politely declined American overtures into resuming the construction of the canal project, TR orchestrated a small revolution in the northernmost province of Panama. Recognized as independent at once, the fledgling government immediately sold the US rights to a 10-mile wide corridor where the construction of the Panama Canal was revived.



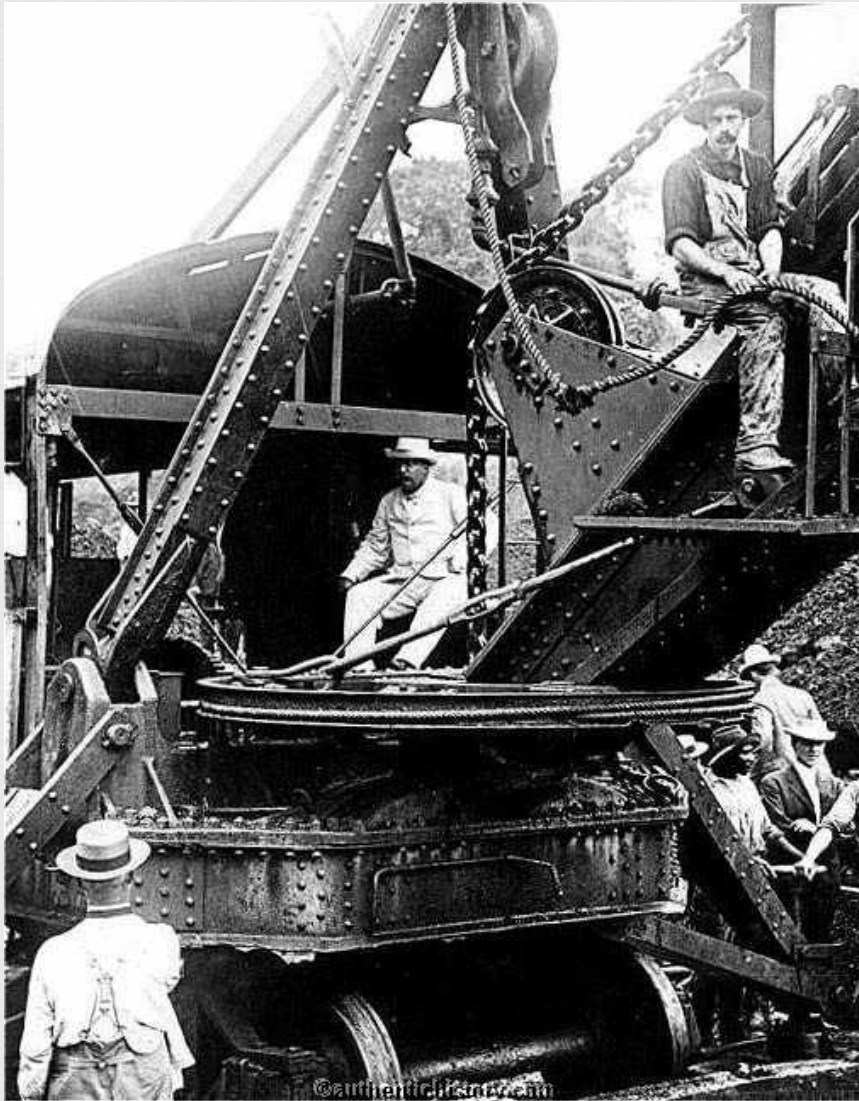
Yellow Fever and Malaria

After over 20,000 workers had died from malaria and yellow fever during the French effort of the 1880s, American investors were justifiably concerned over public health issues regarding the expensive project. There was greater emphasis placed on the role of disease prevention during the new Panama Canal venture than in the previous effort – Americans (somewhat grudgingly) learned from the mistakes of the French. Dr. William Gorgas was placed in charge of combatting the twin pestilences – yellow fever and malaria.



Dr. William Gorgas

A believer in the germ theory of disease, and familiar with the work of Dr. Juan Carlos Findlay and Dr. Walter Reed, William Gorgas would wage war against *Aedes Aegypti*. By exterminating the mosquito, Dr. William Gorgas fought against disease. Gorgas spent time teaching the people working on the Panama Canal project to remove any standing water from their homes, insisted that indoor plumbing be installed in villages, mandated the use of mosquito nets in housing, and sprayed all standing water with a thin coating of petroleum – to prevent mosquitoes from laying eggs and breeding. By the end or 1905, the number of deaths by yellow fever and malaria had plummeted. Despite this over 5,000 men and women, mostly overworked and underpaid Caribbean Islanders of African descent who had been recruited by the US government, died during the construction of the Panama Canal.



President Theodore Roosevelt in Panama

President Roosevelt – who in a fit of modesty, took full credit for the building of the Panama Canal – had such confidence in the healthy environment that Gorgas' leadership had established that he personally visited the construction site. He even took the time to commandeer one of the steam shovels used to build the canal. In doing so, he became the first American President to leave US soil during his term in office – and continued to build his reputation as the most vigorous, energetic President.



The Panama Canal Opens, 1914

The construction of the Panama Canal was not completed for almost ten years – and engineering complications plagued the project from start to finish. The first ship to navigate the canal, the *Ancon*, passed through in the summer of 1914, as war clouds gathered in Europe. “The Great War” would provide another example of the influence of disease – one which we neglect to our own peril.



The Great War, 1914 - 1918

Between 1914 and 1918 Europeans and their allies across the globe used technology and science to kill one another. Modern weaponry and outdated military tactics resulted in a bloodletting unlike any other in the history of Europe. Over ten million soldiers and almost as many civilians died during the conflict – and that doesn't even count the casualties of the Russian Revolution and Civil War, a peripheral event that resulted in millions more dead. It was the first major war in which more deaths were caused by combat than by disease. Yet, ...



The Spanish Flu, 1918 - 1919



The victory over disease was short lived. At the end of World War I, a particularly virulent and deadly strain of influenza, known as the Spanish Flu, resulted in a global pandemic. Believed to a version of swine flu at the time (some scientists suggest Avian Flu now), over 40 Million people – more than twice the number of casualties during World War I – would die during the winter of 1918 - 1919. Unlike other flu strains which tended to target either the very young or the old and feeble, the Spanish Flu devastated individuals in the primes of their lives. Within twenty-four hours of contracting the disease, their chests filled with fluids – autopsies revealed bluish, saturated lungs: men and women who had drown in their own mucus.

The Spanish Flu



PUBLIC NOTICE

In view of the severity of the present

Epidemic of Influenza

and in order that all efforts may be concentrated on the stamping out of the disease, the local Board of Health, after consultation with Kingston Medical Society and the Mayor, has enacted that after Oct. 16th, and until further notice,

1. Theatres and Moving Picture Houses shall be closed and remain closed

2. Churches and Chapels of all denominations shall be closed and remain closed on Sundays.

3. All Schools, Public or Private, including Sunday Schools, shall close and remain closed.

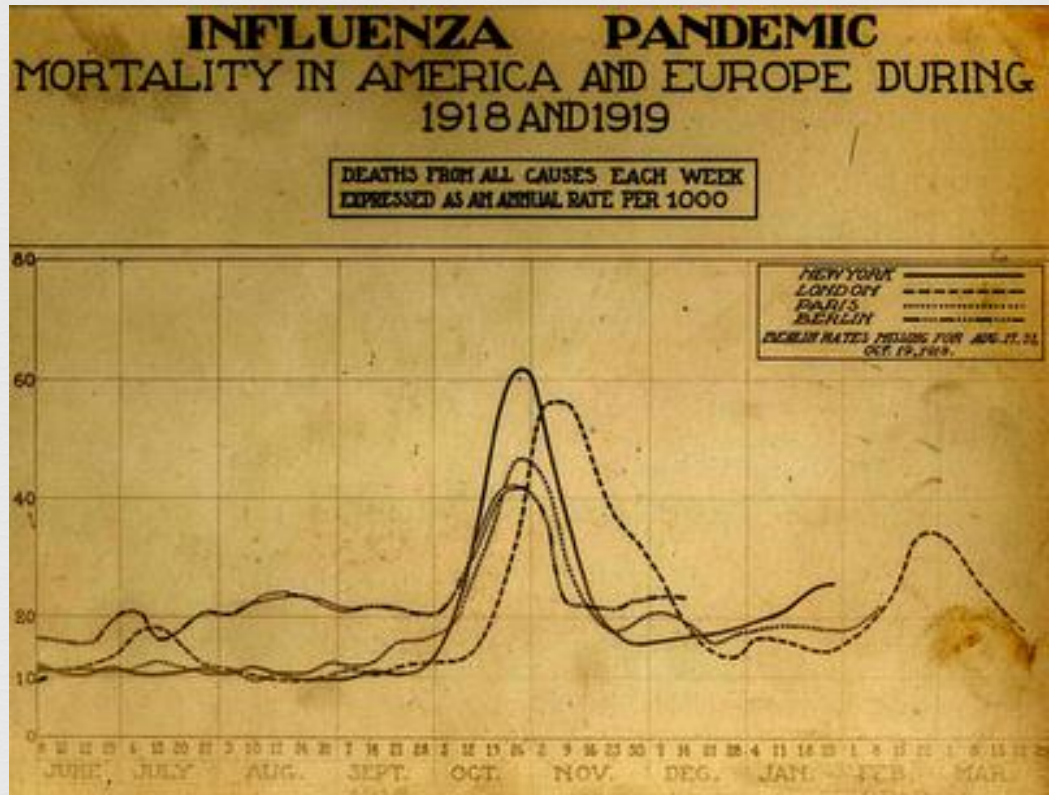
4. Hospitals shall be closed to visitors.

5. No public shall be admitted to courts except those essential to the prosecution of the cases called.

6. The Board advises the public most strongly not to crowd into street cars and to avoid as much as possible any crowded train or an assembly of any kind.

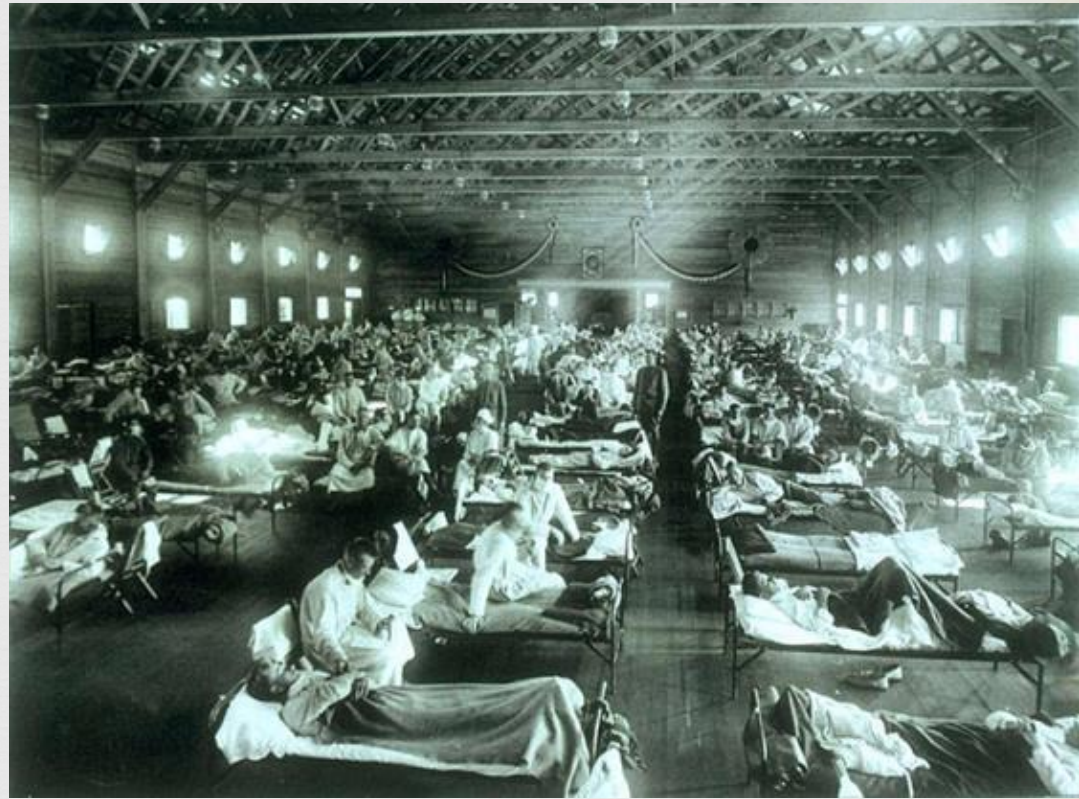
Provisions have been made by the Kingston Medical Society whereby all cases applying for assistance will receive the same either by registered practitioners or by final year medical students acting under instructions. Therefore every case of illness should send in a call to a physician.

A. R. B. WILLIAMSON,
Medical Health Officer.



The Spanish Flu in the United States, 1918 - 1919

- ❧ The United States did not enter "The Great War" until the year 1917, and American "doughboys" did not see significant action in the conflict before 1918.
- ❧ Casualties among US Soldiers were low compared to other nations; nevertheless, the United States military lost over 100,000 men during the conflict.
- ❧ The first outbreaks of the Spanish Flu were reported on military transport trains in Kansas. Soldiers from isolated counties arrived in cramped barracks for boot camp – or boarded transport ships headed "Over There" to fight in France – and were exposed to the disease en masse.
- ❧ As the disease spread across the nation, it mutated, became air-borne, and infected millions. Over 600,000 Americans died in the winter of 1918-1919. Drays patrolled the streets picking up dead bodies in major cities like New York, Boston, and San Francisco; coffin makers could not satisfy demand.



Disease in Modern US History



The Continuing Struggle for Health

Improvements in the Medical Field

- ❧ Since the Pure Food and Drug Act of 1906 ban “patent medicines” and required pharmaceutical companies to reveal the contents of their wares (and guarantee the safety of their products), improvements in medicine have continued.
- ❧ The development of antibiotics (Scottish Scientist Sir Alexander Fleming discovered penicillin in 1928) and improved access to health care professionals have resulted in longer lives and a better quality of life for most individuals.
- ❧ The list of diseases which have been made manageable due to improvements in the medical field is a long one: Polio, Malaria, Yellow Fever, dozens of once lethal “childhood illnesses”, Dysentery, Bubonic Plague, STDs and even AIDS have become medically manageable diseases.
- ❧ Some diseases, like Smallpox, have been wiped out completely.

Center for Disease Control



- ❧ The Center for Disease Control in Atlanta, GA is at the forefront of the battle to cure disease and maintain the public's health.
- ❧ Many of the most pressing health concerns today are diseases which lifestyle choices can impact dramatically – choosing not to smoke cigarettes, eating properly, and exercising are known to play a large role in the prevention of cancer, heart disease, and diabetes.
- ❧ The prevention of contagious diseases and food-borne illnesses like salmonella, botulism, or E. coli are addressed as well.
- ❧ While diseases will always have the capacity to mutate, change, and resist treatments (antibiotic resistant strains of diseases are presently a major concern in the medical profession), it is not prideful to conclude that our public health system is better off today than it has ever been – both in the United States of America and globally, as groups like the World Health Organization address the health concerns of an increasingly interdependent world. Your own good health is intrinsically tied to the good health of others.
- ❧ Whether or not it will be maintained is a concern that will be addressed by (a) personal responsibility, and (b) the devotion to public health, the medical sciences and the medical profession by future generations of taxpayers, students, professors, and pharmaceutical companies.